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MICHIGAN.

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MICHIGAN.

Michigan, one of the northern tier of states of the American Union, the seventeenth in area and ninth in population, is in 41° 42′ to 48° 20′ N. lat., and 82° 25′ to 90° 32′ W. long. It has an area of 58,915 sq. m., or more than that of England and Wales; 1114 sq. m. are occupied by 5173 small lakes, while the surface of 179 islands and islets, from one acre upwards, measures about 633. The coast-line in navigable lake waters is 1624 miles. The state is bounded on the S. by Indiana and Ohio; on the E. by lake Erie, Detroit River (properly Strait), Lake St Clair, St Clair River, Lake Huron, and St Mary's River, beyond all which lies the province of Ontario, Canada; on the N. by Lake Superior, on the SW. (upper peninsula) by Wisconsin, and on the W. by Lake Michigan. From its north-western point at the mouth of Montreal River to the extreme south-east on Maumee Bay is about 500 miles. It is sometimes called the Peninsular State, from its formation in two great peninsulas, the upper and lower, or northern and southern. The upper has an extreme length of 318 and width of 164 miles, the lower of 277 and 197 miles; the latter includes

the Huron Peninsula, or the 'thumb' of the 'mitten,' in eastern Michigan, and the small Leelenaw Peninsula in the north-west. The eastern part of the other, looking toward St Mary's River, is sometimes called St Mary's Peninsula. Keweenaw Peninsula, bearing the great copper-mines, stretches far north into the waters of Lake Superior; and on the south, near Mackinac Island, is the little but picturesque St Ignace Peninsula. The upper region is mostly rugged, broken, rocky, and comparatively barren, though teeming with mineral wealth; but hopeful beginnings of agriculture have been made in the eastern half of it. In the north-west, near Lake Superior, is the highest land in the state, among the hills known as the Porcupine Mountains (1830 feet above the sea). The famous Mineral range passes south of this, from Keweenaw Point south-westward into Wisconsin; but it is merely a gentle swell from both sides, nowhere really mountainous. No part of the lower peninsula is more than 1780 feet above sea-level; and the mean height is only 160 feet above the environing waters of the lakes. The highest part of Detroit is but 73 feet above the river at this point, and the uplift of a few feet in the adjacent river and lake beds would flood a thousand square miles of Michigan soil. This soil is mainly formed by the glacial drift, in alternated clay, sand, and gravel beds, supplying all the chemical constituents of a good soil, and enabling the growth of all crops adapted to this climate. The mean annual temperature of the state is 46·1° F. (summer, 68·5°; winter, 23·8°); the annual rainfall is 35·8 inches. Both peninsulas, with occasional exceptions of swamps or small prairies,

were originally covered with dense forests, the products of which have proved exceedingly valuable. The geology of the state is highly interesting; it represents every rock series known, from the oldest strata to the top of the Carboniferous. In the west of the upper peninsula, on the Wisconsin border, are the Laurentian, and on either side and eastward the Huronian formations, in which are the great deposits of iron ore. The Mineral range is of eruptive or volcanic rock, with older strata tilted upon its sides. Farther eastward are the long belts of the Lower Silurian, curving from Green Bay through the St Mary's Peninsula. The lower peninsula is compared, geologically, to a nest of wooden dishes. Its centre is a coal-bearing area of about 5000 sq. m., carrying, however, comparatively little coal of economic value in workable place and shape; though 58,099 tons were raised in 1889. In succession beyond, and in mighty sweeps around the central tract, are the upturned edges of other Carboniferous strata, then the Devonian formations, and finally the Lower Helderberg group of the Silurian. In the Michigan salt group are the rich brine wells of the Saginaw valley; in the Marshall or Waverley are the Huron grindstones, quarried on the shore of Lake Huron; and other groups yield valuable mineral products.

The output of salt for 1889 was 5,950,000 barrels, the number of wells 254. In salt and timber Michigan leads the United States, and in iron and copper the world. The great Calumet and Hecla copper-mines, the largest operated, with perhaps one exception, are on the Keweenaw Peninsula. The total copper output

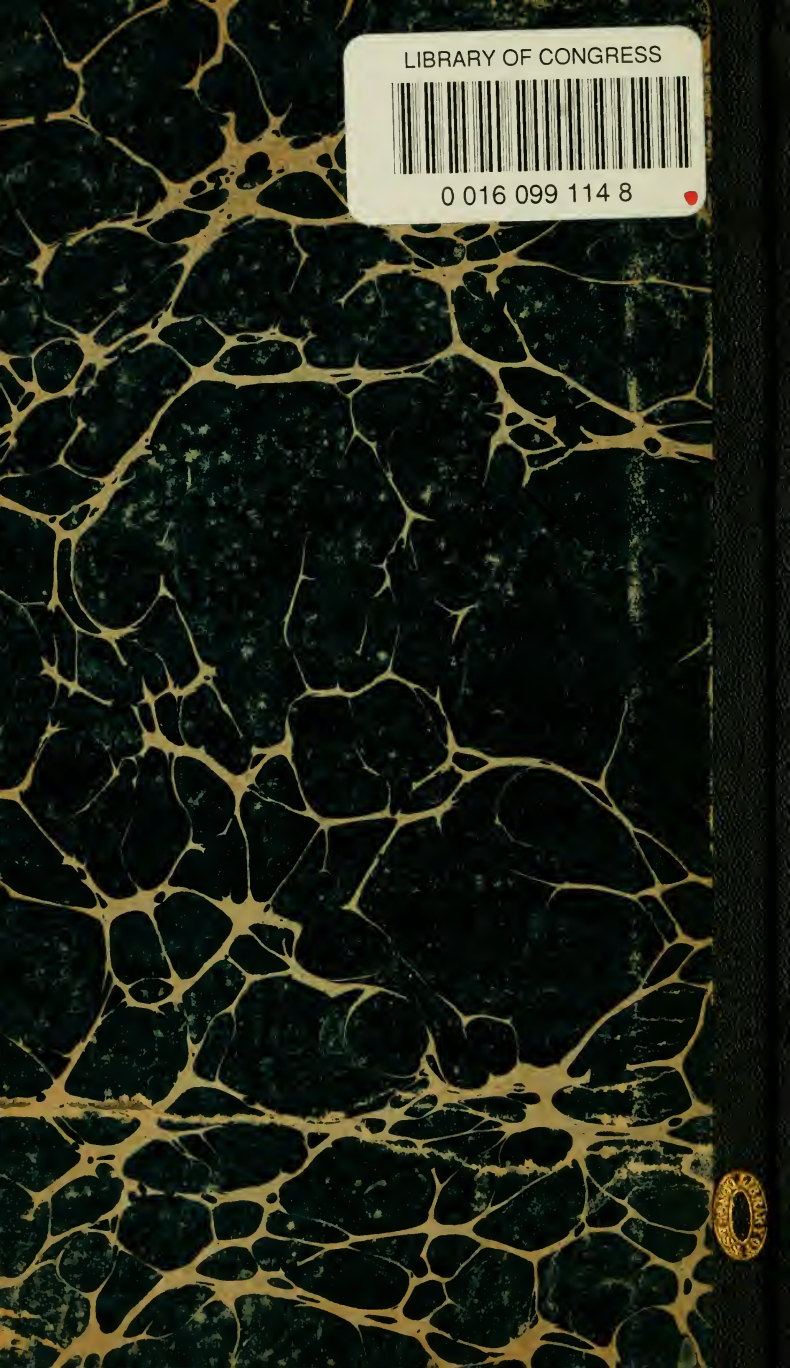
of 1889 was 43,613 tons, of a quality nowhere surpassed, and for certain purposes unequalled. In the same year 5,829,828 long tons of iron ore were mined, mainly in Marquette county. Some gold is found in the upper peninsula, and silver and lead in small amounts. Gypsum appears in immense deposits at Grand Rapids, in the lower peninsula, where 19,823 tons of land-plaster and 206,380 barrels of stucco were produced in 1889. Building-stones abound in both peninsulas, and in the upper there are also statuary and other marbles, and such ornamental stones as agates, jasper, chalcedony, chlorastolites, and others. Glass sand is found in the extreme south-east of the state; and lime, brick, tiles, and the like are made easily and cheaply in many parts. Of the many mineral springs nineteen have become popular resorts, and the waters of four have a commercial value.

Lumbering is the second great industrial interest of the state. The forests of northern Michigan are mostly pine, much of it, as the cork pine, of superior quality and greatly in demand; and for many years the lumber product has been enormous. In 1888 it was: lumber, 4,197,741,224 feet; shingles, 2,560,930,250. In places, however, this industry is beginning to decline, from the extensive destruction of the forests. Other leading manufactories, in order, are grist-mills, foundries and machine-shops, iron and steel works, and those of agricultural implements and of furniture. But agriculture remains the chief industry, employing about half the population. This is one of the greatest wheat states, its average yield per acre 19½ bushels. The next most important crops are maize, oats, and

barley; and in the 'fruit belt,' a narrow strip of about 200 miles in length on the west shore of Lake Michigan, peaches, plums, grapes, and other fruits are grown in great quantity. It is the fourth state in the Union for wool, of which 11,898,047 lb. were marketed in 1888.

The commerce of the state is very great, and is promoted by three ship-canals—one among the shallows at the head of Lake St Clair, another near the head of St Mary's River, at the Sault de Ste Marie, and another on the Keweenaw Peninsula, known as the Portage Lake Canal. For the year ending June 30, 1889, the imports at Detroit amounted to $3,002,557; domestic exports, $5,922,664; foreign exports, $49,223. There are three other ports of entry, at Port Huron, Grand Haven, and Marquette. The railways in the state have about 8000 miles of track, and reach nearly every one of the eighty-four counties. Popular and higher education has been liberally developed, and the illiterates form only 4 per cent. of the population. Besides the state university at Ann Arbor, there are nine denominational colleges, a state normal school at Ypsilanti, a mining-school at Marquette; the agricultural, the school for the blind, and reform school for boys at Lansing; the deaf and dumb institute at Flint, an industrial home for girls at Adrian, and a school for neglected and dependent children at Coldwater. Other principal state charities are four asylums for the insane, an asylum for insane criminals, and the Soldiers' Home at Grand Rapids. There are state prisons at Jackson and Marquette, and houses of correction at Detroit, Marquette, and Ionia.

History.—The Michigan country was probably visited by Jean Nicolet in 1634, at the Sault de Ste Marie, where the first permanent white settlement was made by Father Marquette in 1668 for a Jesuit mission. Detroit was founded in 1701 by a French colony under Cadillac. The country passed to the English in 1760, and to the United States in 1796; it was again occupied by Great Britain in 1812, but was recovered by the Americans the next year. It formed a part of the North-west territory, erected in 1787; became a part of the Indiana territory in 1802, was organised as Michigan territory in 1805, and admitted as a state in 1837. Pop. (1800) 551; (1840) 212,267; (1880) 1,636,937, including 7249 Indians; (1890) 2,089,792. Detroit (205,699) has remained the chief city from the beginning; Grand Rapids (64,147) is second, and Saginaw (46,169) third. Other cities, in order of population, are Bay City, Jackson, Muskegon, Kalamazoo, Port Huron, Lansing (the capital), Battle Creek, West Bay City, Manistee, Ishpeming, Menominee, Flint, Ann Arbor, Adrian, &c. See J. M. Cooley, *Michigan* (Boston, 1885).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